DAVISVILLE NAVAL CONSTRUCTION BATTALION CENTER
DAVISVILLE, RHODE ISLAND

Engineering Field Division/Activity: NORTHDIV
Major Claimant: COMNAVFACENGCOM
Size: 1,294 Acres
Funding to Date: $29,927,000
Estimated Funding to Complete: $29,143,000

Base Mission: Provided mobilization support to Naval Construction Forces

Contaminants: Heavy metals (lead), PCBs, pesticides (dichlorodiphenyl trichloroethane), POLs, volatile organic compounds

Number of Sites:		Relative Risk Ranking of Sites:			
CERCLA:	17	High:	3	Not Evaluated:	0
RCRA Corrective Action:	0	Medium:	4	Not Required:	10
RCRA UST:	8	Low:	8		
Total Sites:	25				

NPL | BRAC II

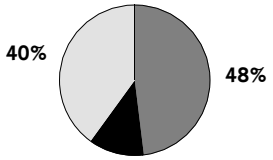
Sites Response Complete: 10

EXECUTIVE SUMMARY

The Davisville Naval Construction Battalion Center (NCBC) is 18 miles south of Providence in North Kingstown, Washington County, Rhode Island. It was a military installation from World War II until its operational closure in 1994. The area is now primarily residential. Operations that contributed to contamination include shops such as carpentry, painting, plumbing, power plant maintenance, vehicle maintenance, pier operations, equipment maintenance and ordnance operations. Site types of concern include landfills, storage and disposal areas, transformer storage areas, spill areas, Underground Storage Tanks (USTs) and fire fighting training areas.

NCBC was placed on the National Priorities List (NPL) because Site 9 (Allen Harbor Landfill) and Site 7 (Calf Pasture Disposal Area), threaten Allen Harbor and Narragansett Bay. Both sites were used for the disposal of solid and liquid wastes without any method of containment other than burial. The proximity of Site 9 to Allen Harbor makes the landfill a potential source for the high molecular weight Polynuclear Aromatic Hydrocarbons and metals detected in the shoreline and sediments. The waters off Site 7 provide an important shellfish resource in Narragansett Bay. A Federal Facility Agreement (FFA) was signed by EPA Region I, the State of Rhode Island and the Navy in 1992.

NCBC consisted of three geographic areas. The Main Center, which includes Sites 2, 3, 5. 6, 7, 9, 11, 13, 14, 16 and Study Areas 1, 4, 15 and Calf Pasture Point Munitions Bunkers (17), is located on Narragansett Bay. The West Davisville Storage Area, which includes Sites 8 and 12, is located three miles west of the Main Center. Camp Fogarty, a former training center, and is the location of Site 10, is located four miles west of the Main Center. Camp Fogarty was transferred to the Department of the Army in December 1993 and is assigned to the Rhode Island National Guard. Municipal water supply wells for the town of North Kingstown are located within a three mile radius of NCBC.



Current Status Of Sites

Studies Underway	12
Cleanups Underway	3
Response Complete	10
TOTAL	25

The Community Relations Plan (CRP) was completed in May 1989. An Administrative Record was established in 1989 and an Information Repository is located at a local library. A Technical Review Committee (TRC), established in April 1988, was converted to a Restoration Advisory Board (RAB) in December 1993. The RAB has 21 members who meet bi-monthly.

There are 25 IR sites consisting of 17 CERCLA sites and 8 UST sites at NCBC. At the end of FY96, two (Sites 9, 17) of the CERCLA sites at NCBC were in the Study Phase, three (Sites 2, 4, 9) were in the Cleanup Phase, three (Sites 6, 10, 11) were in process of a PRAP/ROD for no further response action (NFA) and one (Site 17) site was Response Complete (RC). Removal of an underground tank and leachfield at Site 2 and cleaning of two former battery rooms, removal of asphalt from Study Area 4 and removal of debris from Site 10 was completed in FY 96. Corrective Action Plans (CAP) have been approved by the Rhode Island Department of Environmental Management (RIDEM) for five UST sites from the removal action completed in 1992 calling for NFA at two sites (USTs 7, 8). Corrective action has been completed at three UST sites in FY96. Response Complete for USTs 2, 3, 7, 8 in FY96. The CAP for seven of 27 tanks that were removed in 1995 have been submitted recommending NFA and are under review by RIDEM.

All field investigations, except at Sites 3 and 7 will be complete in FY97. Feasibility Studies (FSs) are underway for Sites 2, 3, 7 and 13. A basewide groundwater evaluation will also be completed leading to a PRAP and ROD for groundwater at West Davisville, Camp Fogarty and Zones 1, 2 and 4 at the Main Center. Munitions bunkers at Calf Pasture Point will be cleaned to remove lead and PCB contaminated soil at Sites 12 and 13. Also in FY97, Proposed Remedial Action Plans (PRAPs) and RODs for Sites 6, 9, 10, 11 and 13 will be prepared.

The BRAC Cleanup Team (BCT), formed in FY94, has helped resolve issues related to the Ecological Risk Assessment and Remedial Investigation/Feasibility Study (RI/FS) reports. The BCT also renegotiated new FFA schedules. A BRAC Business Plan was prepared in February 1996. The reuse plan was completed in January 1994. Future uses will be primarily industrial and some recreational. In FY96, Phase II of the Environmental Baseline Survey (EBS) to characterize all parcels was completed. Fast Track Initiatives have expedited cleanups. Removal actions at four sites were completed in advance of the PRAP and the ROD. Overlapping phases when sufficient information is available to safely begin the next phase has saved time. Final draft FS preparation and review periods were shortened by including revised text on draft comments.

DAVISVILLE NCBC
RELEVANT ISSUES

ENVIRONMENTAL RISK

HYDROGEOLOGY - Two sites at NCBC Davisville are within 1,000 feet of one another. Site 9 (Allen Harbor Landfill) is located adjacent to Allen Harbor and Site 7 (Calf Pasture Point Disposal Area). Both sites threaten Allen Harbor and Narragansett Bay. Municipal supply wells for the town of North Kingstown, which serves approximately 27,000 persons, are located within three miles of hazardous substances on the sites in an unrelated aquifer. Both Allen Harbor Landfill and Calf Pasture Point Disposal Area were used for the disposal of a variety of solid and liquid wastes without any method of containment other than burial. The proximity of Site 9 to the surface water of Allen Harbor makes the landfill a potential source for the high molecular weight PAHs and metals detected in the shoreline and sediments of Allen Harbor, however, recently completed statistical and geostatistical analysis of the data collected in multiple studies concludes that the landfill groundwater is not a contaminant pathway to the harbor sediments.

NATURAL RESOURCES - Allen Harbor is a small inlet from Narragansett Bay. The harbor was closed to shellfishing in 1984 by the Rhode Island Department of Environmental Management (RIDEM). The waters off Calf Pasture Point provide an important shellfish resource. Both saltwater and fresh water wetlands are located on NCBC. No rare, threatened, or endangered species have been observed on the center, but some are occasionally seen in the area. There is a nesting colony of Common Terns on the east side of the Quonset Point NAS airfield.

NCBC has two historical sites eligible for the National Register of Historic Places that include warehouses and residential headquarters. Buildings used as warehouses (Camp Endicott) have been recorded and will be delisted upon completion of a MOA between Navy and RISHPO. The buildings which are structurally unsound will then be demolished.

RISK - In FY94, an Ecological Risk Assessment was done in conjunction with an on-going Remedial Investigation/ Feasibility Study (RI/FS) under EPA guidelines. Three of the 25 sites at NCBC (Sites 3, 7 and 9) received a high ranking, four were ranked medium, and eight were low, under the DOD Relative Risk Ranking System. All high rankings were attributed to either soil or groundwater contamination. Contaminants include petroleum products, PAHs, metals, volatile organic compounds and the chemical additive PCBs. Potential receptors are human and ecological. The Agency for Toxic Substances and Disease Registry (ATSDR) completed a Public Health Assessment in October 1995. Limited concern was expressed about shellfish taken from near shore areas surrounding the landfill.

REGULATORY ISSUES

NATIONAL PRIORITIES LIST - In November 1989, NCBC Davisville was added to the National Priorities List (NPL) with a Hazard Ranking System (HRS) score of 34.52. RAs are being conducted under CERCLA while compliance actions are governed by Federal and Rhode Island state laws.

LEGAL AGREEMENTS - A Federal Facility Agreement (FFA) was signed in March 1992 by the EPA Region I, the State of Rhode Island and the Navy. The Base Realignment and Closure (BRAC) Cleanup Plan (BCP) will be used in lieu of a Site Management Plan (SMP).

PARTNERING - The University of Rhode Island received a grant of $1.3 million from DOD and has established an environmental education and training facility at NCBC. The intent of the training facility is to educate students and train former defense workers in environmental cleanup. The facility is located in buildings recently leased to Rhode Island Economic Development Corporation.

COMMUNITY INVOLVEMENT

RESTORATION ADVISORY BOARD - A Technical Review Committee (TRC) was established in April 1988 and converted to a Restoration Advisory Board (RAB) in December 1993. The RAB has 21 members who meet bi-monthly or as necessary. Meeting agenda items are addressed in an open discussion format. In addition, the Rhode Island Resource Conservation and Development Council, who participate in the RAB has received Technical Assistance Grant (TAG) through EPA to provide continued support to the RAB. Represented on the RAB are the Rhode Island Economic Development Corporation (RIEDC), Town of North Kingstown, Narragansett Indian Tribe, US Fish and Wildlife Service, US Public Health Service, Narragansett Bay Project and the Rhode Island Resource, Conservation and Development Council.

COMMUNITY RELATIONS PLAN - The Community Relations Plan (CRP) was completed in May 1989. An update CRP was completed in FY96 and will be again updated in FY97.

INFORMATION REPOSITORY - An Administrative Record was established in 1989 and an Information Repository was set up in a local library in May 1989. Copies of Administrative Record documents are maintained in the Information Repository for public access.

BASE REALIGNMENT AND CLOSURE

BRAC - In July 1991, the Base Realignment And Closure (BRAC) Commission recommended closure of NCBC. The official closure date was 1 April 1994. Construction battalion training and mobilization activities were transferred to Naval Construction Battalion Center, Gulfport, Mississippi and to Naval Construction Battalion Center, Port Hueneme, California. (It happened long before then, beginning in 1974) Camp Fogarty (374 acres) was transferred to the Army in December 1993. Portions of West Davisville (70 acres) were leased to Rhode Island Port Authority in November 1993 and 21 buildings and a 90 acre storage area were leased in February 1996 and 3 more buildings were leased in July 1996. An additional 10 acres (leased) are associated with the leasing of 24 buildings.

BRAC CLEANUP TEAM - The BRAC Cleanup Team (BCT) was formed in December 1993 and meets regularly to discuss current and future cleanup initiatives. The BCT has helped resolve issues related to the Ecological Risk Assessment and several RI/FS reports. The BCT also renegotiated new FFA schedules. The BCT has representatives from Naval Facilities Engineering Command's Northern Division (NORTHDIV), EPA Region I and the Rhode Island Department of Environmental Management (RIDEM).

DOCUMENTS - The BCP was completed in February 1994 and was updated in 1995. A BRAC Business Plan was prepared in February 1996. A Phase I Environmental Baseline Survey (EBS) was completed in October 1995 and a Phase II EBS Investigation is underway. Field work is complete and the report is under review by the BCT.

Environmental Conditions of Property Classification						
1	2	3	4	5	6	7
7 acres	63 acres	448 acres	0 acres	3 acres	31 acres	732 acres

LEASE/TRANSFER - There are 1,284 acres available for disposal. Currently, 170 acres are leased. There are 518 acres environmentally available for transfer, of which 374 have been transferred.

DAVISVILLE NCBC
RELEVANT ISSUES

REUSE - Future uses will be mainly industrial with some recreational use of certain areas. The Reuse Plan was completed in January 1994. The plan was approved by the North Kingstown Town Council and the RIPA Board of Directors in February 1994.

FAST TRACK INITIATIVES - Fast Track Initiatives have expedited cleanups. For example, removal actions at four sites will be completed in advance of the Proposed Remedial Action Plan (PRAP) and the Record of Decision (ROD). Also, overlapping phases when sufficient information is available to safely begin the next phase has saved time. Final draft feasibility study preparation and review periods have been eliminated by expanding response to comments on drafts to include proposed revised text.

HISTORICAL PROGRESS

FY80

NCBC Davisville was issued a RCRA Generator Facility Permit that identified 13 Solid Waste Management Units (SWMUs) (nine landfills, two storage areas, one waste oil tank storage area and an injection well). Ten of the RCRA SWMUs are the same as 10 CERCLA sites: Sites 2, 3, 6, 7, 8, 9, 10, 11, 13 and 15. The remaining three SWMUs are not currently Defense Environmental Restoration Account (DERA) funded.

FY84

Sites 1-14 - An Initial Assessment Study (IAS), equivalent to a Preliminary Assessment (PA), identified fourteen potentially contaminated sites. The IAS recommended Sites 5, 7 and 9 for further investigation in a Confirmation Study (CS). Sites 12 and 14 were recommended for limited investigation. Sites 1-4, 6, 8, 10, 11 and 13 were found not to pose a threat to human health or the environment and were not recommended for further investigation. However, all sites except Site 1 were investigated further in the CS.

FY87

Sites 2-14 - The CS, equivalent to a Site Inspection (SI), was completed. No further action was recommended for Sites 4 and 5. Sites 2, 3, 6, 7, 9 and 10-14 were recommended for further investigation.

FY92

Sites 2, 3, 5-11 and 13 - A Phase I Remedial Investigation/Feasibility Study (RI/FS) that began in 1988 was completed. Concurrent with this Phase I RI/FS, a Federal Facility Agreement (FFA) was signed between the Department of the Navy, the State of Rhode Island and the EPA.
Sites 1, 4 and 15 - The FFA identified these three sites as Study Areas. Study Area 15 was used to store containerized waste petroleum products and solvents and was added by agreement of the parties concerned.
Sites 2, 3 and 5-14 - The FFA identified these twelve sites as Areas of Concern (AOC).

USTs 1-7 - Fifty-six tanks were removed. Sampling following tank removals indicated seven areas that required further investigation to determine if remediation is necessary. An Initial Site Characterization (ISC) was completed.

FY93

Sites 12 and 14 - The RI/FS was completed. Asphalt and concrete were removed as an Interim Remedial Action (IRA). A Record of Decision (ROD) for removal of the remaining contaminated concrete was prepared. This will be the Final Remedial Action (FRA) for these sites. The Phase I FS consisted of an Initial Screening of Alternatives. Based on the results of Phase I and a Risk Assessment Technical Memorandum, there was enough information to support a ROD.
Site 16 - A removal action was completed. The extent of the contamination was determined through sampling. The creosote-contaminated soil was removed and taken to a hazardous waste landfill. Additional sampling and analysis were done to confirm cleanup levels were achieved. This was the FRA at this site.

FY94

Site 12 - A revised Remedial Design (RD) was completed.
Site 5 - Phase II RI/FS was completed.
Site 8 - Recommended for no further action.
Sites 1 and 15 - A Site Investigation (SI) was completed.

FY95

All Sites - Completed basewide groundwater contour map.
USTs 1-7 - Prepared a CAP for seven of the 56 tanks that were removed in FY92. Investigations have been underway to prepare a CAP for seven of the 27 tanks that were removed in FY95.
Site 14 - Completed RA for removal of soil contaminated with PCB.
Sites 5 and 8 - Signed ROD for No Further Action.
Sites 2 and 13 - Initiated the process for a time critical removal action.
Study Area 4 - Initiated the process for a non-time critical removal action.

PROGRESS DURING FISCAL YEAR 1996

FY96

All Sites - Started Phase II of the EBS to characterize all parcels. Phase II field work was completed in FY96 and a draft report issued in August 1996. Regulator review, response to comments and BCT development of corrective actions required as a result of the investigation are ongoing and the final Phase II report was expected to be issued in 2nd Quarter FY97. Work plans were completed. Field work was completed on 92 EBS Phase II review items. The basewide groundwater study to establish inorganic background levels was completed and a draft Ground Water Evaluation was submitted.
Site 9 (Allen Harbor Landfill) - The draft FS was completed.
Site 2 - Removal of underground tanks and piping were completed along with cleaning of the battery rooms.
Site 3 - Investigation at Site 3 was begun to characterize an off-site source in an area under cognizance of the Army Corps of Engineers as a Formerly Used Defense Site (FUDS). Investigation expanded to include natural attenuation of volatile organic chlorides as possible remedial action.
Site 4 - Removed asphalt material.
Site 17 - Completed PA/SI.
Sites 2, 4, 10, and 12 - Completed Remedial Design.
No FS for Sites 6, 10 and 11 since they are NFA.
Sites 6, 9, 10 and 11 - Initiated Proposed Remedial Action Plans (PRAPs) and RODs.
Site 13 - Began PCB contaminated soil removal action. Confirmatory sampling shows that additional removal is required. PRAP and ROD will be initiated as soon as removal action is completed.
Twenty-one (21) buildings and a 90 acre storage area were leased in February 1996 and 3 more buildings were leased in July 1996 to the Rhode Island Port Authority.
An updated CRP was completed in FY96.

DAVISVILLE NCBC
PLANS FOR FISCAL YEARS 1997 AND 1998

FY97

Basewide - Complete Phase II EBS Investigation Report and begin corrective actions. Complete groundwater evaluation, PRAP and ROD.
Site 3 - Field sampling to test for natural attenuation will be completed. The RI for off-site source characterization will be completed and a comprehensive RI/FS submitted.
Study Area 4 - Complete removal of asphalt pool and close out the site.
Sites 6, 10 and 11 - The NFA ROD will be completed.
Site 7 - The RI/FS and PRAP/ROD (including Study Area 17) is scheduled to be completed in September 1997.
Site 9 - Complete RI/FS for remedy selection and PRAP/ROD.
Site 12 - Complete the Remedial Action (RA) and close out the site.
Site 13 - Complete the removal action, revised HHRA and Ecological Risk Assessment and submit the FS and a draft PRAP.
Site 14 - Submit site close-out and receive completion certification from EPA.
Study Area 15 - Update SASE and NFA Decision Document.

FY98

Basewide - Complete EBS Phase II corrective actions.
Site 3 - Complete FS, PRAP and ROD which will include Site 2 and Study Areas 1 and 4 including groundwater.
Site 7 - Implement ROD remedial action or long term monitoring as required.
Site 9 - Implement ROD remedial action.

PROGRESS AND PLANS

CERCLA	FY95 and before	FY96	FY97	FY98	FY99	FY00	FY01	FY02 and After
PA / SI	15	1						
RI / FS	2	1	12					
RD	1	4	4	1				1
RAC	2		2	4	1			1
RAO								3
IRA	5(5)	3(3)	2(2)					
RC	2	1	8	3				3
Cumulative % RC	12%	18%	65%	82%	82%	82%	82%	100%
UST	**FY95 and before**	**FY96**	**FY97**	**FY98**	**FY99**	**FY00**	**FY01**	**FY02 and After**
SA		1						
CAP	7							
DES	2	2						
IMP		3	1					
IMO								
IRA		2(2)						
RC	3	4	1					
Cumulative % RC	38%	88%	100%	100%	100%	100%	100%	100%

Newport Naval Education and Training Center
Newport, Rhode Island

Engineering Field Division/Activity: NORTHDIV
Major Claimant: CNET
Size: 1,400 Acres
Funding to Date: $40,558,000
Estimated Funding to Complete: $35,853,000

Base Mission: Training center and provides logistics support

Contaminants: Base-neutral and acid extractable organics, PCBs, volatile organic compounds

Number of Sites:		Relative Risk Ranking of Sites:			
CERCLA:	19	High:	11	Not Evaluated:	0
RCRA Corrective Action:	0	Medium:	4	Not Required:	8
RCRA UST:	4	Low:	0		
Total Sites:	23				

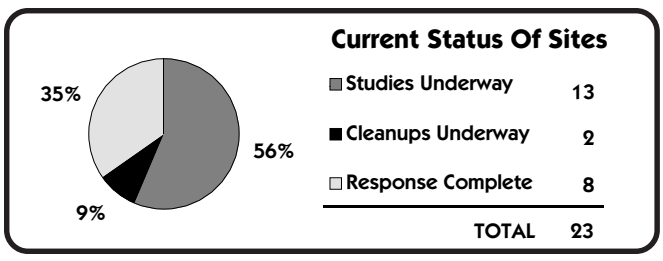
NPL

Sites Response Complete: 8

EXECUTIVE SUMMARY

Newport Naval Education and Training Center (NETC) is located 60 miles south of Boston, Massachusetts and 25 miles southeast of Providence, Rhode Island. The installation is spread along six miles of the western shoreline of Aquidneck Island, north of Newport, Newport County, Rhode Island. Newport NETC facilities are also on Gould Island, west of Aquidneck Island. NETC currently covers 1,439 acres; prior to 1973, it covered 2,692 acres. The excess acreage was turned over to the General Services Administration (GSA) in 1973. NETC was used as a refueling depot beginning in the early 1900's. Refueling facilities were expanded during World War II (WWII), as the base had a much larger role then as the home port for many warships. After WWII, the installation was restructured to support research, development and specialized training. Currently, NETC provides education and training to naval officers. Past operations included boiler plant maintenance, pest control, stormwater collection, sewage collection and treatment, bilge water disposal, hazardous waste disposal, fueling operations, waste oil recovery, sludge disposal, ordnance operations and materials storage. Landfills contain contaminants that could potentially affect nearshore sediments as well as groundwater and surface water. The Navy has changed its operational processes to prevent further contamination. The primary contaminants of concern are the chemical additive PCB, copper, tetra-ethyl lead and ethyl benzene. A Federal Facility Agreement (FFA) was signed in 1992 with the EPA which provides a schedule and plan for site cleanup.

Newport NETC is situated along the shoreline of Aquidneck Island, and surface runoff quickly finds its way into Narragansett Bay. All of the streams which receive drainage from areas of NETC also discharge directly into the bay. The groundwater moves in a westward direction and discharges into the bay. None of the streams or ponds within the boundaries of Newport NETC are used for potable water. The potable water supply for NETC is purchased from the City of Newport which utilizes a series of reservoirs. Groundwater at NETC, including Gould Island, is generally within a depth of 10 feet. The groundwater in areas close to the bay is often within just 2 or 3 feet of the surface. This shallow depth, coupled with the facts that the average annual precipitation is 43 inches and that the soils are moderately permeable, makes contamination of the groundwater possible. There are no wells within the boundaries of NETC, with the exception of Gould Island, but numerous wells exist in close proximity. These are domestic wells, but they are upgradient from NETC and are not threatened by the activity.



A Technical Review Committee (TRC) was formed in April 1988, and was converted to a Restoration Advisory Board (RAB) in FY95. The first formal RAB meeting was held early in FY96. Information Repositories were set up in June 1990 at public libraries in Newport, Middletown, and Portsmouth, Rhode Island. An Administrative Record was established in December 1991.

There are 23 IR sites consisting of 19 CERCLA sites and 4 USTs sites. At the end of FY96, 13 sites were in the study phase and 2 cleanups are underway. Site 13 has a Record of Decision (ROD) for groundwater and pump and treat is active. A ROD has been completed for Site 1 and a cap is under construction at the landfill. A treatability study for the use of cement for fixating Toxic Characteristics Leaching Procedure (TCLP), lead solids, excavated from the landfill at Site 2, was completed in FY95 with indications of feasibility for the procedure. A second treatability study for the destruction of petroleum contamination in the soil by using an innovative technology, white rot fungus, was initiated. In FY95, used sandblast grit was removed at Site 19. The grit from Site 19 and the treated soil from Site 2 is being used as fill material under the cap at Site 1 for cost savings. Off shore Ecological Risk Assessments (ERA) are underway at Sites 1 and 19. An onshore Study Area Screening Evaluation (SASE), which includes an ERA, is underway and continuing at Site 19, since FY96. Response is complete on eight sites. A Remedial Investigation/ Feasibility Study (RI/FS) is being performed at Site 2 (Melville North Landfill).

There are seven Formerly Used Defense Sites (FUDS) at NETC Newport; Sites 3, 5, 6, 14, 15, 16 and 18. The Army Corps of Engineers will be conducting further investigation for the other FUDS sites (Sites 3, 5, 6, 14-16 and 18). These seven FUDS sites are Response Complete (RC) in the Navy's program due to transfer to the FUDS program.

NEWPORT NETC
RELEVANT ISSUES

ENVIRONMENTAL RISK

HYDROGEOLOGY - Newport NETC is situated along the shoreline of Aquidneck Island, and surface runoff quickly finds its way into Narragansett Bay. All of the streams which receive drainage from areas of NETC also discharge directly into the bay. None of the streams or ponds within the boundaries of NETC, present or past areas, are used for potable water. The potable water supply for NETC is purchased from the City of Newport. The upper portion of the bay, in the vicinity of Providence, is much more industrialized than the lower portions of the bay where NETC is located and is likely to be more contaminated. The Melville Fishing Area occurs just off-site.

Groundwater at NETC, including Gould Island, is generally within a depth of ten feet. The groundwater in areas close to the bay is often within just two or three feet of the surface. This shallow depth, coupled with the facts that the average annual precipitation is 43 inches and that the soils are moderately permeable, makes contamination of the groundwater possible. The groundwater moves in a westward direction and discharges into Narragansett Bay. The groundwater is not being utilized at NETC, although during World War II, wells supplied the potable water on Gould Island. NETC receives its potable water from the city of Newport which utilizes a series of reservoirs. There are no wells within the boundaries of NETC, with the exception of Gould Island, but numerous wells exist in close proximity. These are domestic wells, but they are upgradient from NETC and are not threatened by the contamination from the base.

One possible off-site source of environmental contamination is an unofficial landfill on Portsmouth town property which is located adjacent to NETC in the Melville North area. This landfill receives mostly municipal refuse type wastes. The groundwater in the area could be adversely affected by potential contaminants disposed of at this site. The groundwater in the area of the landfill is migrating towards NETC. According to a 1986 report, sediments collected from Narragansett Bay just off the shoreline of McAllister Point Landfill contain lead, copper and nickel. Surface water and groundwater flow from the landfill into the bay, which is used for boating and fishing. Because the bay is an inlet to the Atlantic Ocean, it is influenced by tides. One tank farm is 300 feet from a coastal wetland.

NATURAL RESOURCES - There are no visible signs of stress to the bay biota along the NETC shoreline. There is a 'dead zone' in the bay adjacent to Derecktor Shipyard where no biota can be observed. It is unknown if this is the result of contamination or lack of oxygen produced by poor water circulation. The entire shoreline of NETC is closed to commercial shellfishing. However, much of the remainder of the bay is open to shellfishing. The materials within the landfills and other potential contamination sites on the base may cause chronic or acute effects on area biota. Possible receptors include shellfish, plankton and mummichog/cunner fish. The shellfish have life histories which include filter feeding and burrowing in the sediments. This tends to accumulate contaminants in the body tissues. Shellfish in the bay having these characteristics include quahogs, soft shelled clams, oysters and blue mussels. All of these organisms are heavily harvested and consumed by humans. The plankters most affected by potential contaminants would be the early life stages of fish and shellfish. The eggs and larvae are non-mobile and remain suspended in the water column. In this stage of development, sensitive tissues and membranes are not protected as in adults and leaves them susceptible to contaminants. There is a commercial mussel farm (Blue-Gold Sea Farm) located on the northern border of the NETC waterfront. Mussels from this farm are commercially harvested and shipped throughout the United States for human consumption.

RISK - A Baseline Human Health Risk Assessment for Sites 1, 2, 9, 12 and 13 was completed in November 1991. An offshore Ecological Risk Assessment for Site 1 was also completed in November 1992.

Under the DOD Relative Risk Ranking System, 10 sites and one Underground Storage Tank (UST) site Newport NETC received a high relative risk ranking. These sites include two landfills, two tank farms, a fire fighting training area, an electroplating shop and a shipbuilding area. Groundwater and sediments are the primary media affected by the landfills. Receptors are human and ecological. Landfill wastes include solvents, paints and the chemical additive PCB. The tank farms were storage areas for various fuels. Primary media affected is groundwater. The fire fighting area has free product and metals contamination. Affected media are groundwater, soils and sediment. Migration is towards the bay due to tidal flushing. The bay is a recreational area.

The electroplating shop had waste discharged directly to the ocean through discharge pipes. The shipyard area had large quantities of oils, paints and solvents released into the soils. Metals and the chemical additive PCB have been detected in sediments. Potential receptors include ecological and humans through the ingestion of shellfish. To reduce risk, a RCRA Subtitle C cap will be placed over Site 1, including shore protection. Hot spot soil removals are planned for Site 2. Since NETC is on the National Priorities List (NPL), the Agency for Toxic Substances and Disease Registry (ATSDR) completed a Public Health Assessment in June 1993.

REGULATORY ISSUES

NATIONAL PRIORITIES LIST - NETC Newport was proposed for the National Priorities List (NPL) in July 1989. In November 1989, NETC was listed on the NPL with a Hazard Ranking System (HRS) score of 32.25. EPA combined data from two sites, Site 1 (McAllister Point Landfill) and Site 7 (Tank Farm #1) to determine the HRS score. Since the sites are not contiguous, the Navy recommended revising the score to assess each site individually, but no rescoring was done. Contaminants of concern from these two sites were the chemical additive PCB, copper, and the fuel components tetra-ethyl lead and ethyl benzene. Migration routes of concern were groundwater and surface water.

LEGAL AGREEMENTS - Concurrent with Phase I of the Remedial Investigation/Feasibility Study (RI/FS), a Federal Facility Agreement (FFA) was signed between the Department of the Navy (DON), State of Rhode Island and EPA Region 1 on 23 March 1992. The FFA identified a total of 18 sites, six Study Areas (SAs 4, 7, 8, 10, 11 and 17), and four Areas of Concern (AOCs 1, 9, 12 and 13). Newport NETC was issued a RCRA Hazardous and Solid Waste Amendments (HSWA) permit in 1986. This permit includes a schedule for cleanup of Solid Waste Management Units (SWMUs) under the RCRA Corrective Action process.

PARTNERING - In FY94, the Navy partnered with the University of Rhode Island School of Oceanography to conduct estuarine Ecological Risk Assessments in Narragansett Bay. Ecological Risk Assessments began at Sites 1, 9 and 19 with the assistance of the university.

The installation was involved in two partnering sessions. The Navy, Trustees and regulatory agencies shortened document turn around time by clarifying lines of communication and incorporating meetings into the document review process. Consensus statements on issue resolution were produced by the participants. Another partnering session involved the Navy and the contractors who are performing the studies and cleanups.

The installation held a formal partnering session with EPA Region I and the Rhode Island Department of Environmental Management (RIDEM) 30-31 August 1995.

COMMUNITY INVOLVEMENT

RESTORATION ADVISORY BOARD - A Technical Review Committee (TRC) was formed and meetings have been held periodically since April 1988. The TRC was converted to a

NEWPORT NETC
RELEVANT ISSUES

Restoration Advisory Board (RAB) in FY95. The RAB has met monthly since having their first meeting in February 1996.

COMMUNITY RELATIONS PLAN - A Community Relations Plan (CRP) was completed in July 1990. An update of the CRP was started in FY96 and will be completed in the spring of 1997.

INFORMATION REPOSITORY - Three Information Repositories were set up in June 1990 at the Newport Public Library, Newport, Rhode Island, at the Middletown Public Library, Middletown, Rhode Island, and at the Portsmouth Public Library, Portsmouth, Rhode Island. An Administrative Record was established in December 1991. Copies of some of the Administrative Record documents are contained in the Information Repositories.

HISTORICAL PROGRESS

FY83

Sites 1-18 - An Initial Assessment Study (IAS), equivalent to a Preliminary Assessment (PA), was completed in 1983 and identified 18 potentially contaminated sites at Newport NETC. Sites 1, 2, 5-7, 10-15, 17 and 18 were recommended for further studies. No Further Action (NFA) was recommended for Sites 4, 8 and 9; however, these sites were brought back into the program during the Remedial Investigation/Feasibility Study (RI/FS) phase. Sites 3 and 16 are not discussed in the IAS because they were determined to be outside the scope of the Naval Assessment and Control of Installation Pollutants (NACIP) program.

FY86

Sites 1, 2, 7, 12, 14 and 17 - A Confirmation Study (CS), equivalent to a Site Inspection (SI), was completed. Additional work was recommended for five sites. NFA was recommended for Site 17, however, the site was brought back into the program during the RI/FS phase.
Sites 1, 2, 7, 10-14 and 17 - Newport NETC was issued a Hazardous and Solid Waste Amendments (HSWA) permit and identified nine Solid Waste Management Units (SWMUs). The closure plans for these SWMUs are being handled through the RCRA Corrective Action Plan (CAP) and will include remediation of soil contamination. The groundwater contamination for the SWMUs will be addressed under CERCLA.

FY91

Sites 1, 2, 9, 12 and 13 - A Phase I RI/FS which began in 1989 was completed. Even though Site 2 was determined outside the property boundaries of Newport NETC and classified as a Formerly Used Defense Site (FUDS), the Department of the Navy decided to include this site in the Phase I RI/FS. Additional work was recommended for all sites.

FY92

Sites 2, 3, 5, 6, 14-16 and 18 - The Federal Facility Agreement (FFA) determined these sites to be outside the property boundaries of NETC Newport and they were classified as FUDS.
Sites 1, 2, 9, 12 and 13 - A Phase II RI/FS began.
Sites 4, 7, 8, 10, 11 and 17 - These sites were included in the RI/FS in 1992.
Sites 4, 8 and 17 - A Study Area Screening Evaluation (SASE) work plan, analogous to a mini-RI/FS, was completed.
Sites 7, 10 and 11 - The Defense Logistic Agency (DLA) continued study at these tank farms, with periodic reports submitted to NETC. No other studies are ongoing or planned for these sites.
Site 13 - An Interim Record of Decision (IROD) for Site 13 (Tanks 53 and 56) Tank Farm #5 was signed in September 1992. The remedy consists of groundwater extraction, treatment using coagulation/filtration and ultraviolet (UV) oxidation and Long Term Monitoring (LTM). The remedy will prevent migration of contaminants.

FY93

Site 1 - A Phase II Remedial Investigation (RI) was completed. A Record of Decision (ROD) specifying the Remedial Action (RA) for McAllister Point Landfill was signed in September 1993. The RA consists of securing and isolating the landfill contents utilizing a multilayer cap in combination with fencing, surface controls, deed restriction and LTM. This is the final action for Operable Unit (OU) 1.
Site 2 - A removal action, consisting of the removal of petroleum contaminated soil, was completed.

FY94

Site 1 - The Remedial Design (RD) to cap the landfill was completed.
Site 2 - The RD was completed for additional hot spot removals at the landfill.
UST 2 - Tank removal was completed and free product recovery began in September 1994 and is still underway.

FY95

Site 1 - Began construction of the cap for the landfill.
Site 2 - A treatability study for the use of cement for fixating Toxic Characteristics Leaching Procedure (TCLP) lead solids excavated from the landfill was completed with indications of feasibility for the procedure. A second treatability study for the destruction of petroleum contamination in the soil by using an innovative technology, white rot fungus, has been initiated.
Site 19 - Removal of used sandblast grit was completed. The grit was then used as fill material under the cap at Site 1.
UST 3 - Removed tank contents.
USTs 3 and 4 - Completed RIs.
Site 17 - A Study Area Screening Evaluation for the electroplating shop began.

PROGRESS DURING FISCAL YEAR 1996

FY96

Site 1 - Construction of the RCRA cap was suspended over the winter of FY96 with the implementation of an erosion control and protection shutdown plan. Completion of the cap was delayed due to weather. The cap was completed (IRA) in the fall of 1996. The Fate and Transport Model, used for predicting the pathway of any contaminants migrating from the landfill through the groundwater, will be evaluated during the Feasibility Study (FS) to assess the need for RA regarding the groundwater and near shore sediments.
Sites 1 and 9 - The FY95 funding rescission postponed the following Newport NETC projects: FS for Site 9 (Old Fire Fighting Training Area), and the Landfill Management of Migration Plan for Site 1 (McAllister Point Landfill) OU 2. FY97 funding will be applied toward Site 1 and or, OU 2 design, if required.
Sites 1 and 19 - The Ecological Risk Assessment is underway.
Sites 2 and 19 - Completed a hot spot soil removal action (IRA).
Site 19 - Began Study Area Screening Evaluation.
USTs 1-3 - CAP was completed. UST 2 was Response Complete.
UST 3 - Design was completed.
UST 3 - Two IRAs were completed.

NEWPORT NETC
PLANS FOR FISCAL YEARS 1997 AND 1998

FY97

Site 1 - RI/FS will be completed.
Site 2 - Remedial Design to be completed.
UST 4 - CAP proposed for completion.
USTs 1 and 3 - IMP is scheduled for completion.
USTs 1, 3 and 4 - IRA is expected to be completed.
Site 1 - Expecting Response Complete.
The ERA for Site 1 will be completed and the FS for OU#2 at site 1 will be started.

FY98

Site 2 - RI/FS is scheduled for completion.
Site 1 - Remedial Design is expected for completion.
Site 1 OU 2 -The FS will be completed and the PRAP and ROD will be underway.
Site 2 - Soil removal IRA planned for completion.
UST 4 - Design is planned for completion.

PROGRESS AND PLANS

CERCLA	FY95 and before	FY96	FY97	FY98	FY99	FY00	FY01	FY02 and After
PA / SI	12							
RI / FS			1	2		3	2	4
RD			1	1	1		4	5
RAC					1	2		9
RAO								9
IRA	1(1)	3(3)		1(1)	1(1)			
RC	7							12
Cumulative % RC	37%	37%	37%	37%	37%	37%	37%	100%

UST	FY95 and before	FY96	FY97	FY98	FY99	FY00	FY01	FY02 and After
SA								
CAP		3	1					
DES		1		1				
IMP			2		1			
IMO								2
IRA		1(2)	3(3)					
RC		1	1					2
Cumulative % RC	0%	25%	50%	50%	50%	50%	50%	100%